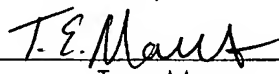




Patent Docket P0576P1C3

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of  Karoly Nikolics et al.  Serial No.: 10/755,190  Filed: January 9, 2004  For: GLYCOPROTEIN HORMONE RECEPTOR MOLECULES	Group Art Unit: To Be Assigned  Examiner: To Be Assigned  Confirmation No: To Be Assigned  CUSTOMER NO: 09157  <b>CERTIFICATE OF MAILING</b> I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on  February 19, 2004   Tom Marrs
---	--

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants submit herewith patents, publications or other information (attached hereto and listed on the attached revised Form PTO-1449) of which they are aware, which they believe may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR § 1.56.

This Information Disclosure Statement is filed in accordance with the provisions of:

☒ **37 CFR § 1.97(b)**

- within three months of the filing date of the application other than a continued prosecution application under 37 CFR § 1.53(d); **or**
- within three months of the date of entry of the national stage of a PCT application as set forth in 37 CFR § 1.491, **or**
- before the mailing of the first Office action on the merits; **or**
- before the mailing of the first Office action after the filing of a request for a continued examination under 37 CFR § 1.114.

☐ **37 CFR § 1.97(c)**

- by the applicant after the period specified in 37 CFR § 1.97(b), but prior to the mailing date of any of a final action under 37 CFR § 1.113, or a notice of

allowance under 37 CFR §1.311, or an action that otherwise closes prosecution in the application, and is accompanied by either the fee set forth in 37 CFR §1.17(p) or a statement as specified in 37 CFR §1.97(e), as checked below.

☐ **37 CFR §1.97(d)**

- after the period specified in CFR §1.97(c), and is accompanied by the fee set forth in 37 CFR §1.17(p) and a statement as specified in 37 CFR §1.97(e), as checked below.

[If either of boxes 37 CFR §1.97(c) or 37 CFR §1.97(d) is checked above, the following statement under 37 CFR §1.97(e) may need to be completed.]

- ☐ **37 CFR §1.97(e)** Each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.
- ☒ **37 CFR §1.704(d)** Each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and the communication was not received by any individual designated in §1.56(a) more than thirty days prior to the filing of this information disclosure statement. Therefore, in accordance with the provisions of 37 CFR §1.704(d), the filing of this information disclosure statement will not be considered a failure to engage in reasonable efforts to conclude prosecution under 37 CFR §1.704.
- ☐ The U.S. Patent and Trademark Office is hereby authorized to charge Deposit Account No. 07-0630 in the amount of \$180.00 to cover the cost of this Information Disclosure Statement under 37 CFR §1.17(p). Any deficiency or overpayment should be charged or credited to this deposit account.

**A list of the patent(s) or publication(s) is set forth on the attached revised Form PTO-1449 (Modified). A copy of the items on PTO-1449 is supplied herewith. A copy of the International Search Report for the corresponding EP application is enclosed herewith.**

Those patent(s) or publication(s) which are marked with an asterisk (\*) in the attached PTO-1449 form are not supplied because they were previously cited by or submitted to the Office in a prior application Serial No. 09/877,804, filed June 7, 2001 and relied upon in this application for an earlier filing date under 35 USC §120.

A concise explanation of relevance of the items listed on PTO-1449 is:

- ☒ not given
- ☐ given for each listed item
- ☐ given for only non-English language listed item(s) [Required]
- ☐ in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references.

In accordance with 37 CFR § 1.97(g), the filing of this information disclosure statement shall not be construed as a representation that a search has been made.

In accordance with 37 CFR § 1.97(h), the filing of this information disclosure statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in 37 CFR § 1.56(b).

The Commissioner is hereby authorized to charge any additional fees required under 37 CFR 1.16 and 1.17 for this Information Disclosure Statement, or credit overpayment to Deposit Account No. 07-0630.

Respectfully submitted,

GENENTECH, INC.

Date: February 18, 2004

By: 

Deirdre L. Conley, Ph.D.

Reg. No. 36,487

Telephone No. (650) 225-2066

FORM PTO-1449

U.S. Dept. of Commerce  
Patent and Trademark OfficeAtty Docket No.  
P0576P1C3Serial No.  
10/755,190

## LIST OF DISCLOSURES CITED BY APPLICANT

(Use several sheets if necessary)

Applicant  
Nikolics et al.Filing Date  
12 Jan 2004Group  
1653

## U.S. PATENT DOCUMENTS

Examiner Initials		Document Number	Date	Name	Class	Subclass	Filing Date
	* 1	4,560,649	24.12.85	Saxena et al.			
	* 2	4,921,808	01.05.90	Schneyer et al.			25.06.86

## FOREIGN PATENT DOCUMENTS

Examiner Initials		Document Number	Date	Country	Class	Subclass	Translation Yes No
	* 3	0 108 633	16.05.84	EPO			
	* 4	WO 91/03483	21.03.91	PCT			
	* 5	WO 91/09121	27.06.91	PCT			
	* 6	WO 91/09137	27.06.91	PCT			
	* 7	WO 91/10735	25.07.91	PCT			

## OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages, etc.)

	8	Abou-Issa et al., "Properties of Solubilized and Purified Follitropin Receptor From Calf Testis" <u>Biochimica et Biophysica Acta</u> 631:97-103 (1980)
	* 9	Aruffo et al., "Molecular Cloning of a CD28 cDNA by a High-Efficiency COS Cell Expression System" <u>Proc. Natl. Acad. Sci. USA</u> 84:8573-8577 (1987)
	*10	Ascoli et al., "Effects of Collagenase on the Structure of the Lutropin/Choriogonadotropin Receptor" <u>The Journal of Biological Chemistry</u> 261(8):3807-3815 (1986)
	*11	Ascoli et al., "On the structure of the luteinizing hormone/chorionic gonadotropin receptor" <u>Endocrine Rev.</u> 10(1):27-44 (Feb 1989)
	*12	Ascoli, M. <u>The Receptors</u> , Conn, P.M. (ed.) Vol. 2:368-400 (1985)
	*13	Auletta, J. et al., "Mechanisms controlling corpus luteum function in sheep, cows, nonhuman primates, and women especially in relation to the time of luteolysis" <u>Endocrinology Review</u> 9(1):88-105 (Feb. 1988)
	*14	Branca et al., "The Subunit Structure of the Follitropin Receptor" <u>The Journal of Biological Chemistry</u> 260(18):9988-9993 (1985)
	*15	Bruch et al., "The rat ovarian lutropin receptor. Purification, hormone binding properties, and subunit composition" <u>Journal of Biological Chemistry</u> 261(20):9450-9460 (July 15, 1986)
	*16	Chan, J. et al., "TSH receptor structure" <u>ACTA Endocrinologica</u> (Supplement) 281:166-172 (1987)
	17	Dattatreyamurty et al, "Polyclonal Antibodies against Follitropin (FSH) Receptor Interfere with Hormone Binding, but Mimic the Effects of FSH" <u>Endocrinology</u> 126:1318-1326 (1990)
	*18	Dattatreyamurty et al., "Isolation of the luteinizing hormone-chorionic gonadotropin receptor in high yield from bovine corpora lutea. Molecular assembly and oligomeric nature" <u>Journal of Biological Chemistry</u> 258(5):3140-3158 (March 10, 1983)
	*19	Dixon et al., "Cloning of the gene and cDNA for mammalian beta-adrenergic receptor and homology with rhodopsin" <u>Nature</u> 321(6065):75-79 (May 1986)
	*20	Dufau et al., "Gonadotropin receptors. Solubilization and purification by affinity chromatography" <u>Journal of Biological Chemistry</u> 250:4822-4824 (1975)

Examiner

Date Considered

\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449		U.S. Dept. of Commerce Patent and Trademark Office		Atty Docket No. P0576P1C3	Serial No. 10/755,190
<b>LIST OF DISCLOSURES CITED BY APPLICANT</b> (Use several sheets if necessary)				Applicant Nikolics et al.	
				Filing Date 12 Jan 2004	Group 1653
<b>OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages, etc.)</b>					
	*21	Fitch et al., "Optimal Sequence Alignments" <u>Proc. Natl. Acad. Sci. USA</u> 80:1382-1386 (Mar 1983)			
	*22	Hashimoto, C. et al., "The Toll gene of Drosophila, required for dorsal-ventral embryonic polarity, appears to encode a transmembrane protein" <u>Cell</u> 52(2):269-279 (Jan. 29, 1988)			
	*23	Hwang, J. et al., "Characterization of the subunit structure of gonadotropin receptor in luteinized rat ovary" <u>Journal of Biological Chemistry</u> 259(3):1978-1985 (February 10, 1984)			
	*24	Hwang, J. et al., "Spatial relationships of the human chorionic gonadotropin (hCG) subunits in the assembly of the hCG-receptor complex in the luteinized rat ovary" <u>Proc. Natl. Acad. Sci. USA</u> 81(15):4667-4671 (August 1984)			
	*25	Jacobs et al., "Isolation and Characterization of Genomic and cDNA Clones of Human Erythropoietin" <u>Nature</u> 313:806-810 (Feb 1985)			
	*26	Jallal et al., "Solubilization and Purification of the Lutropin (LH) Receptor From Porcine Testes" <u>Reprod. Nutr. Dev.</u> 28(4B):1177-1192 (1988)			
	*27	Ji, I. et al., "Both $\alpha$ and $\beta$ Subunits of Human Choriogonadotropin Photoaffinity Label and the Hormone Receptor" <u>Proc. Natl. Acad. Sci. USA</u> 78:5465-5469 (1981)			
	*28	Ji, I. et al., "Macromolecular photoaffinity labeling of the lutropin receptor on granulosa cells" <u>Proc. Natl. Acad. Sci. USA</u> 77(12):7167-7170 (December 1980)			
	*29	Kataoka, T. et al., "DNA Sequence and Characterization of the <i>S. cerevisiae</i> Gene Encoding Adenylate Cyclase" <u>Cell</u> (Part 1) 43:493-505 (1985)			
	*30	Keinanen et al., "Purification and Partial Characterization of Rat Ovarian Lutropin Receptor" <u>Journal of Biological Chemistry</u> 262:7920-7926 (1987)			
	*31	Kellokumpu, S. and Rajaniemi, H., "Involvement of plasma membrane enzymes in the proteolytic cleavage of luteinizing hormone receptor" <u>Endocrinology</u> 116(2):707-714 (February 1985)			
	*32	Kohn et al., "Autoimmune Thyroid Disease Studied with Monoclonal Antibodies to the Thyrotropin Receptor" <u>Monoclonal Antibodies</u> pps. 230-253 (1983)			
	*33	Kotulla et al., "Radioligand Receptor Assay (RRA) for Thyroid-Stimulating Hormone (TSH) Using Triton X-100 Solubilized Receptor Preparation" <u>Radioimmunoassay and Related Procedures in Medicine</u> 1982 pps. 297-305 (1982)			
	*34	Krusius, T. et al., "Primary structure of an extracellular matrix proteoglycan core protein deduced from cloned cDNA" <u>Proc. Natl. Acad. Sci. USA</u> 83(20):7683-7687 (October 1986)			
	*35	Kusuda, S. et al., "Purification and characterization of the rat ovarian receptor for luteinizing hormone. Structural studies of subunit interaction" <u>Journal of Biological Chemistry</u> 261(34):16161-16168 (December 5, 1986)			
	*36	Lee et al., "Identification of Low and High Molecular Weight Follicle-Stimulating Hormone Receptor-Binding Inhibitors in Human Follicular Fluid" <u>Fertility and Sterility</u> 53:830-835 (1990)			
	*37	Lefkowitz, RJ and Caron, MG, "Adrenergic receptors. Models for the study of receptors coupled to guanine nucleotide regulatory proteins" <u>Journal of Biological Chemistry</u> 263(11):4993-4996 (Apr 1988)			
	*38	Libert et al., "Cloning, Sequencing and Expression of the Human Thyrotropin (TSH) Receptor: Evidence for Binding of Autoantibodies" <u>Biochem. and Biophys. Res. Comm.</u> 165(3):1250-1255 (1989)			
	*39	Lipman, DJ et al., "Rapid and sensitive protein similarity searches" <u>Science</u> 227(4693):1435-1441 (March 22, 1985)			
	*40	Lopez, J. et al., "Cloning of the $\alpha$ chain of human platelet glycoprotein Ib: A transmembrane Protein with Homology to Leucine-Rich $\alpha_2$ -glycoprotein" <u>Proc. Natl. Acad. Sci. USA</u> 84:5615-5619 (1987)			
Examiner				Date Considered	
*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.					

FORM PTO-1449		U.S. Dept. of Commerce Patent and Trademark Office		Atty Docket No. P0576P1C3	Serial No. 10/755,190
<b>LIST OF DISCLOSURES CITED BY APPLICANT</b> (Use several sheets if necessary)				Applicant Nikolics et al.	
				Filing Date 12 Jan 2004	Group 1653
<b>OTHER DISCLOSURES (Including Author, Title, Date, Pertinent Pages, etc.)</b>					
*41	Masu, Y. et al., "cDNA cloning of bovine substance-K receptor through oocyte expression system" <u>Nature</u> 329(6142):836-838 (1987)				
*42	McFarland et al., "Lutropin-Choriogonadotropin Receptor: An Unusual Member of the G Protein-Coupled Receptor Family" <u>Science</u> 245:494-499 (1989)				
*43	Metsikko et al. <u>Endocrinology</u> 109(5):1399-1403 (1981)				
*44	Minegishi et al., "Purification and characterization of Leydig cell luteinizing hormone receptor" <u>Journal of Biological Chemistry</u> 262(35):17138-17143 (Dec. 15, 1987)				
*45	Nagayama et al., "Molecular Cloning, Sequence and Functional Expression of the cDNA for the Human Thyrotropin Receptor" <u>Biochem. and Biophys. Res. Comm.</u> 165(3):1184-1190 (1989)				
*46	Nathans, J. et al., "Isolation, sequence analysis, and intron-exon arrangement of the gene encoding bovine rhodopsin". <u>Cell</u> 34(3):807-814 (October 1983)				
*47	Parmentier et al., "Molecular Cloning of the Thyrotropin Receptor" <u>Science</u> 246:1620-1622 (1989)				
*48	Pierce et al., "Glycoprotein Hormones: Structure and Function" <u>Ann. Rev. Biochem.</u> 50:466-495 (1981)				
*49	Podesta et al., "Luteinizing hormone triggers two opposite regulatory pathways through an initial common event receptor aggregation" <u>Endocrinology</u> 119(3):989-997 (1986)				
*50	Podesta et al., "Receptor aggregation induced by anti lutropin receptor antibody and biological response in rat testis leydig cells" <u>Proc. Natl. Acad. Sci. USA</u> 80(13):3986-3990 (1983)				
*51	Pritchett, DB et al., "Structure and Function Expression of Cloned Rat Serotonin 5HT-2 Receptor" <u>EMBO Journal</u> 7(13):4135-4140 (1988)				
*52	Rebois, RV et al., "Covalent crosslinking of human chorionic gonadotropin to its receptor in rat testes" <u>Proc. Natl. Acad. Sci. USA</u> 78(4):2086-2089 (Apr 1981)				
53	Reichert, Jr. et al., "The Follicle-Stimulating Hormone (FSH) Receptor in Testis: Interaction with FSH, Mechanism of Signal Transduction, and Properties of the Purified Receptor" <u>Biology of Reproduction</u> 40:13-26 (1989)				
*54	Roche et al., "Purification, Characterization, and Amino-terminal Sequence of Rat Ovarian Receptor for Luteinizing Hormone/Human Choriogonadotropin" <u>Ther Journal of Biological Chemistry</u> 264(8):4636-4641 (1989)				
*55	Rosembliet et al., "Characterization of an antiserum to the rat luteal luteinizing hormone/chorionic gonadotropin receptor" <u>Endocrinology</u> 123(5):2284-2289 (Nov 1988)				
*56	Schnell, DJ and Etzler, ME, "Primary structure of the Dolichos biflorus seed lectin" <u>Journal of Biological Chemistry</u> 262(15):7220-7225 (May 25, 1987)				
57	Schneyer et al., "Follicle-Stimulating Hormone (FSH) Immunoactivity in Porcine Follicular Fluid Is Not Pituitary FSH" <u>Endocrinology</u> 123:487-491 (1988)				
*58	Schofield et al., "Primary structure of the human beta-adrenergic receptor gene" <u>Nucleic Acids Research</u> 15(8):3636 (Apr. 24, 1987)				
*59	Shin, J. et al., "Intersubunit disulfides of the follitropin receptor." <u>Journal of Biological Chemistry</u> 260(23):12828-12831 (Oct. 1985)				
*60	Shin, J. et al., "Photoaffinity Labeling of the Follitropin Receptor" <u>Journal of Biological Chemistry</u> 260:14020-14025 (1985)				
Examiner				Date Considered	
*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.					

USCOMM-DC 80-398.